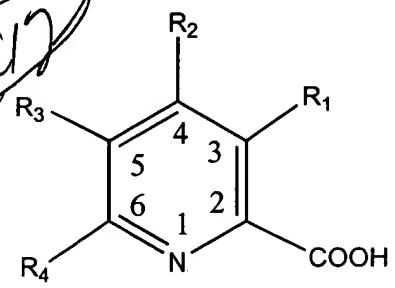
81. The method of claim 79 wherein said step of contacting said metal ion chelating agent with an item to be preserved comprises contacting less than about 0.025% said metal ion chelating agent with said item to be preserved.

82. The method of claim 79 wherein R_1, R_2, R_3 and R_4 are hydrogen.

83. A method of preserving an item to be preserved comprising contacting said metal ion chelating agent with an item to be preserved, said metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

REMARKS

Claims 1-12 have been cancelled. Claims 13-83 have been added. A Pending Claims sheet is included herewith.

Support for claims 13-42 is found, among other places in the specification, in Examples 4, 6, 8, 22 and 25. Support for claims 43-47 is found, among other places, in Figure 1 and in Example 6. Support for claims 48-58 is found, among other places, in Example 5. Support for

claims 59-64 is found, among other places, in Example 4. Support for 65-69 is found, among other places, in Example 3. Support for claims 70-74 is found, among other places, in Example 7. Support for claims 75-83 is found, among other places, on page 21, lines 4-14.

Claims 1-12 are rejected under 35 U.S.C. § 101 as not being directed to statutory subject matter. Specifically, the examiner noted that the claims were drafted in terms of "use," which is not one of the statutory classes of invention. Applicant respectfully traverses the rejection.

Claims 1-12 have been cancelled. Accordingly, Applicant respectfully requests withdrawal of rejection of claims 1-12 under 35 U.S.C. § 101.

Claims 1-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the examiner states that claims 1-12 provide for the use of chelating agents, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process Applicant is intending to encompass. Applicant respectfully traverses the rejection.

Claims 1-12 have been canceled. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1-12 under 35 U.S.C. § 112, second paragraph.

New claims 13-83 are either compositions of matter or method claims. The method claims set forth steps involved in the method/process, and therefore particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Accordingly, Applicant submits that claims 13-83 are proper under 35 U.S.C. § 112, second paragraph.

Claim 2 is rejected under 35 U.S.C. § 112, first paragraph. The examiner states that the specification, while being enabling for treating human carcinoma cells *in vitro*, does not

reasonably provide enablement for treating all cancers. The examiner noted that the Applicant would be entitled to the specific cancers disclosed in the specification only.

Claim 2 is canceled. Accordingly, Applicant submits that the rejection of claim 2 under 35 U.S.C. § 112, first paragraph, be withdrawn.

New claims 13-83 have been added. Support for the new claims is described above. Accordingly, Applicant submits that claims 13-83 are proper under 35 U.S.C. § 112, first paragraph.

Claims 3 and 4 are rejected under 35 U.S.C. § 112, first paragraph. Specifically, the examiner stated that the specification, while being enabling for treating certain viruses, does not reasonably provide enablement for treating all upper respiratory or pulmonary diseases.

Claims 3 and 4 are canceled. Accordingly, Applicant submits that the rejection of claims 3 and 4 under 35 U.S.C. § 112, first paragraph be withdrawn.

New independent claims 13, 18, 21 and 39 are directed to compositions comprising picolinic acid, or a derivative thereof, for the treatment of upper respiratory infections. Support for claims 13, 18, 21, 39, and the claims that depend therefrom, is found in Example 22 of the specification. Example 22 describes the *in vivo* use of nasal spray containing 3mM picolinic acid in physiologic saline for the treatment of a male college student. The subject used one or two sprays in each nostril after the evening meal and before bedtime. Upon arising, the student was relieved of his symptoms. Accordingly, Applicant submits that methods for treating upper respiratory infections by the administration of picolinic acid, or its derivatives, i.e. claims 13, 18, 21 and 39, are enabled by the specification.

Claims 14-17, 19-20, 22-38 and 40-42 depend either directly or indirectly from independent claims 13, 18, 21 and 39, respectively, and therefore incorporate all of the

limitations therein. Claims 13, 18, 21 and 39 are submitted to be enabled for the aforementioned reasons. Accordingly, Applicant submits that claims 14-17, 19-20, 22-38 and 40-42 are likewise enabled by the specification.

Claim 1 is rejected under 35 U.S.C. § 102(a) as being anticipated by Valerio et al. (WO 9624610). Specifically, the examiner states that Valerio et al. discloses a chelating agent of Formula I, and combinatorial libraries of compounds and derivatives of Formula I, diseases mediated by uPA, for example angiogenesis, and the use of chelating agents for treating uPA-mediated disorders such as angiogenesis.

Valerio et al. describes a compound of Formula I, and combinatorial library of compounds thereof, used for treating uPA-mediated disorders. Col. 2, lines 10-43, Col. 8, lines 35-67. Valerio et al. does not describe pharmaceutically active picolinic acid, or its derivatives for the treatment of diseases, disorders, or conditions selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections. Valerio et al. similarly does not describe methods of treating such diseases by the administration of pharmaceutical compositions comprising picolinic acid, or its derivatives. Further, Valerio et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising picolinic acid or its derivatives. Moreover, Valerio et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of the inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claim 1 has been canceled. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 102 (a) be withdrawn.

Claim 8 is rejected under 35 U.S.C. § 102 (a) as being anticipated by DeCicco et al. (WO 9427436). Specifically, the examiner states that DeCicco et al. describes metal chelating agents and their antimicrobial effectiveness when combined with quaternary ammonium compounds.

DeCicco describes a preservative system comprising a quaternary ammonium compound in combination with either a paraben, hydrophobic chelator, e.g. picolinic acid, or alcohol compound. Page 22, lines 8-35. DeCicco does not, however, describe preservatives comprising fusaric acid, or the use thereof as a preservative.

Claim 8 is canceled. Accordingly, Applicant respectfully requests that the rejection of claim 8 under 35 U.S.C. § 102 (a) be withdrawn.

Claims 75 and 76 have been added. Claim 75 is directed to a preservative comprising less than about 0.025% fusaric acid, or a derivative thereof. Claim 76 is directed to a method of preserving an item that comprises contacting fusaric acid, or a derivative thereof, with the item to be preserved. DeCicco does not describe preservatives comprising fusaric acid, or the use thereof as a preservative. Accordingly, Applicant submits that new claims 75 and 76 are patentable over DeCicco.

Claim 2 is rejected under 35 U.S.C. § 102 (b) as being anticipated by Mease et al. (U.S. Pat. No. 5,292,398). Specifically, the examiner states that Mease et al. disclose a method of using injectable chelating agents as cancer treatments.

Mease et al. describes cyclohexyl chelating agents useful for diagnostic procedures. Mease et al. do not describe the use of picolinic acid or its derivatives to treat metastatic colon cancer, hepatitis C infections, angiogenesis, sun burn, decreased immune function and upper respiratory infections. Further, Mease et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising

picolinic acid or its derivatives. Moreover, Mease et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of the inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claim 2 is canceled. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 2 under 35 U.S.C. § 102 (b).

Claim 4 is rejected under 35 U.S.C. § 102(b) as being anticipated by Dutta et al. Specifically, the Examiner states that Dutta et al. disclose the use of proline derivatives as inhalation therapy for the treatment of pulmonary disease.

Dutta et al. describes proline derivatives, and methods of using such derivatives for the treatment of pulmonary emphysema, atherosclerosis or osteo- or rheumatoid arthritis in warm-blooded animals. Col. 1, line 53 - Col. 2, line 57. Dutta et al. does not describe or suggest the use of picolinic acid, or derivatives thereof, for the treatment of a disease, disorder or condition selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections. Further, Dutta et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising picolinic acid or its derivatives. Moreover, Dutta et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claim 4 is canceled. Accordingly, Applicants respectfully request that the rejection of claim 4 under 35 U.S.C. § 102(b) be withdrawn.

Claims 3, 5 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Weier et al. (U.S. Pat. No. 5,262,426). Specifically, the examiner states that Weier et al. disclose the use

of pharmaceutical chelating agents as antiinflammatory agents, to induce an immune response, and as an treatment for diseases of the pulmonary passages, including upper respiratory infections.

Weier et al. describe a class of N,N'-cycloalkyl/alkyl benzamides of certain 4H-imidazo[4,5-b]pyridine derivatives wherein the phenyl ring of the benzamide group is substituted with one or more moieties, and the use of such derivatives for the treatment of cardiovascular and immunoinflammatory related disorders mediated by platelet activating factor. Col. 1, lines 7-19. Weier et al. does not describe or suggest the use of picolinic acid, or a derivative thereof, for the treatment of a disease, disorder or condition selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections. Weier et al. similarly does not describe methods of treating such diseases by the administration of pharmaceutical compositions comprising picolinic acid, or its derivatives. Further, Weier et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising picolinic acid or its derivatives. Moreover, Weier et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of the inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claims, 3, 5 and 7 are canceled. Accordingly, Applicant respectfully requests that the rejection of claims 3, 5 and 7 under 35 U.S.C. § 102(b) be withdrawn.

Claim 6 is rejected under 35 U.S.C. § 102(b) as being anticipated by Phillipp et al. (U.S. Pat. No. 4,420,476). Specifically, the Examiner states that Phillipps et al. disclose the use of benzofuropyrazol-amine derivative compounds, and their combinations with complex metal hydrides as analgesic agents.

Phillipps et al. describes benzofuropyrazol-amine derivative compounds, and their combinations with complex metal hydrides, as analgesic agents. Col. 1, lines 11-24. Phillipps et al. does not describe or suggest the use of picolinic acid, or a derivative thereof, for the treatment of a disease, disorder or condition selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections. Phillipps et al. similarly does not describe methods of treating such diseases by the administration of pharmaceutical compositions comprising picolinic acid, or its derivatives. Further, Phillipps et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising picolinic acid or its derivatives. Moreover, Phillipps et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of the inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claim 6 is canceled. Accordingly, Applicant respectfully requests that the rejection of claim 6 under 35 U.S.C. § 102(b) be withdrawn.

Claims 9-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Gibby (U.S. Pat. No. 4,822,594). Specifically, the Examiner states that Gibby discloses the administration of internally metal chelating agents for the treatment of heavy metal poisoning, including Wilson's disease, iron overload and lead poisoning. Applicant respectfully traverses the rejection.

Gibby describes a saccharide matrix containing chelating agents, for example, EDTA DTPA, or DOTA for enhancing the contrast of magnetic resonance images and treating heavy metal poisoning in a living subject. Col. 2, line 23-50, Col. 3, lines 1-7, and 32-36. Gibby does not describe or suggest the use of picolinic acid, or a derivative thereof, for the treatment of a disease, disorder or condition selected from the group consisting of hepatitis C infections,

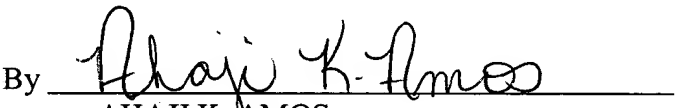
angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections. Gibby et al. similarly does not describe methods of treating such diseases by the administration of pharmaceutical compositions comprising picolinic acid, or its derivatives. Further, Gibby et al. does not describe systemic preparations, intranasal solutions, inhalants, or ophthalmic preparations for the control of angiogenesis comprising picolinic acid or its derivatives. Moreover, Gibby et al. does not describe lavages or preservatives comprising picolinic acid or its derivatives, or formulations for the treatment of the inflammation associated with acne or sunburn that comprise fusaric acid, or its derivatives.

Claim 9-11 are canceled. Accordingly, Applicant respectfully requests that the rejection of claims 9-11 under 35 U.S.C. § 102(b) be withdrawn.

Applicant respectfully submits that the amendments herein place the application in condition for allowance. If the amended patent application is not in condition for allowance, it is requested that Examiner contact Applicant's undersigned attorney by telephone. Applicant's undersigned attorney may be reached in St. Louis, MO, USA by telephone at (314) 552-6123 or by facsimile at (314) 552-7123. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

Thompson Coburn LLP

By 

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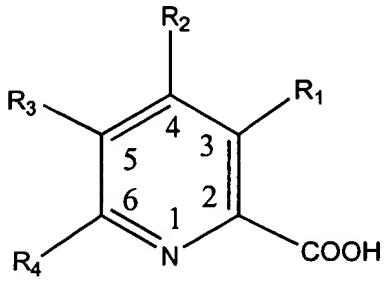
PENDING CLAIMS[1]

U.S. PATENT APPLICATION NO. 09/784,631

13. A pharmacologically active metal ion chelating agent for the treatment of a disease, disorder, or condition selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, decreased immune function, metastatic colon cancer and upper respiratory infections, wherein the disease, disorder or condition is mediated by a protein having a metal ion-protein complex, the agent having the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

14. The metal ion chelating agent of claim 13 wherein R_3 is a butyl group.

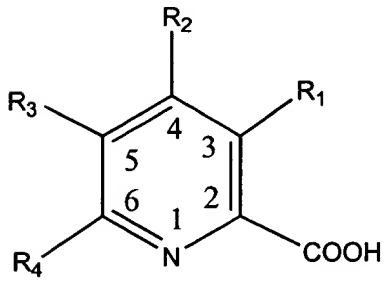
15. The metal ion chelating agent of claim 13 wherein said metal is zinc.

[1] If the amendments are accepted by the Examiner.

16. The metal ion chelating agent of claim 13 further comprising at least one of a pharmacologically suitable isotonic vehicle, a pharmacologically effective and physiologic saline vehicle and a nebulizing agent.

17. The metal ion chelating agent of claim 13 wherein R_1, R_2, R_3 and R_4 are hydrogen.

18. A pharmacologically active metal ion chelating agent for the treatment of a disease, disorder, or condition selected from the group consisting of hepatitis C infections, angiogenesis, sun burn, inflammation associated with acne, decreased immune function, metastatic colon cancer and upper respiratory infections, wherein the disease, disorder or condition is mediated by a protein having a metal ion-protein complex, the agent having the following structure:



or a pharmacologically acceptable salt thereof,

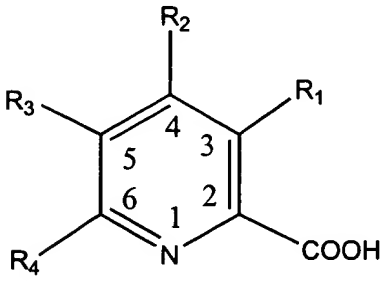
wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

19. The metal ion chelating agent of claim 18 wherein said metal is zinc.

20. The metal ion chelating agent of claim 18 further comprising at least one of a pharmacologically suitable isotonic vehicle, a pharmacologically effective and physiologic saline vehicle and a nebulizing agent.

21. A method for the treatment of at least one disease, disorder or condition selected from the group consisting of decreased immune function, metastatic colon cancer, hepatitis C infections, angiogenesis, sun burn, and upper respiratory infections, comprising the administration of an effective amount of a pharmaceutical composition comprising a metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, R_3, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

22. The method of claim 21 wherein R_3 is a butyl group.

23. The method of claim 21 wherein said pharmaceutical composition is administered in the range of about 500 mg twice per day to about 2000 mg per day.

24. The method of claim 21 wherein said pharmaceutical composition further comprises a pharmacologically suitable isotonic vehicle.

25. The method of claim 24 wherein said pharmaceutical composition is an intranasal solution comprising in the range between about 0.01 mM to about 50 mM said metal ion chelating agent and at least one said pharmacologically suitable isotonic vehicle.

26. The method of claim 25 wherein said intranasal solution comprises in the range between about 0.1 mM to about 20 mM said agent.

27. The method of claim 26 wherein said intranasal solution comprises about 3mM said metal ion chelating agent.

28. The method of claim 21 wherein said pharmaceutical composition is a systemic medicament comprising in the range of about 1% to about 100% said metal ion chelating agent and a pharmacologically acceptable carrier.

29. The method of claim 28 wherein said pharmaceutical composition is in capsule form.

30. The method of claim 21 wherein said pharmaceutical composition further comprises at least one nebulizing agent.

31. The method of claim 30 wherein said pharmaceutical composition is an inhalant comprising in the range between about 0.001% to about 50% metal ion chelating agent and said nebulizing agent.

32. The method of claim 30 wherein said nebulizing agent is at least one nebulizing agent selected from a group consisting of water and saline.

33. The method of claim 21 wherein said pharmaceutical composition further comprises a topical lotion.

34. The method of claim 33 wherein said pharmaceutical composition is a formulation for the treatment of sunburn and comprises in the range between about 1% to about 99% said metal ion chelating agent and said topical lotion.

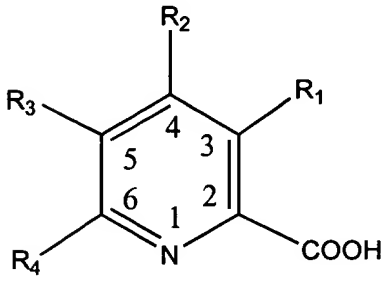
35. The method of claim 34 wherein said pharmaceutical composition comprises in the range between about 5% to about 15% of said metal ion chelating agent.

36. The method of claim 31 wherein said pharmaceutical composition is an ophthalmic preparation for the control of angiogenesis and said pharmaceutical composition comprises in the range between about 0.01% to about 99% said metal ion chelating agent and a pharmacologically acceptable carrier.

37. The method of claim 36 wherein said pharmaceutical composition comprises in the range between about 5% to about 10% said metal ion chelating agent.

38. The method of claim 31 wherein R_1, R_2, R_3 and R_4 are hydrogen.

39. A method for the treatment of at least one disease, disorder or condition selected from the group consisting of decreased immune function, metastatic colon cancer, hepatitis C infections, angiogenesis, sun burn, inflammation associated with acne and upper respiratory infection, comprising the administration of an effective amount of a pharmaceutical composition comprising a metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine and hydrogen; and

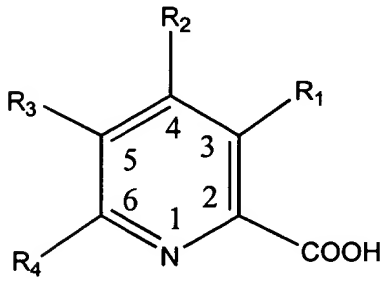
R_3 is a butyl group.

40. The method of claim 39 wherein said pharmaceutical composition further comprises a topical lotion.

41. The method of claim 40 wherein said pharmaceutical composition is a formulation for the treatment of inflammation associated with acne and comprises in the range of between about 1% to about 99% metal ion chelating agent and said topical lotion.

42. The method of claim 41 wherein said pharmaceutical composition comprises in the range of about 5% to about 15% of said metal ion chelating agent.

43. A systemic preparation comprising approximately 1% to approximately 100% metal ion chelating agent and a pharmacologically acceptable route of administration, wherein said metal ion chelating agent is represented by the following structure:



or a pharmacologically acceptable salt thereof,

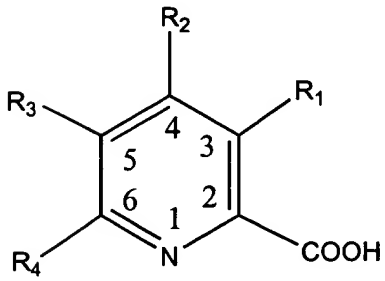
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

44. The systemic preparation of claim 43 wherein said route of administration is a capsule.

45. The systemic preparation of claim 43 wherein R_3 is a butyl group.

46. The systemic preparation of claim 43 wherein R_1, R_2, R_3 and R_4 are hydrogen.

47. A systemic preparation comprising approximately 1% to approximately 100% metal ion chelating agent and a pharmacologically acceptable route of administration, wherein said metal ion chelating agent is represented by the following structure:

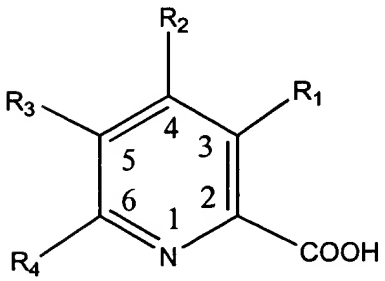


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

48. An intranasal solution comprising in the range between about 0.01 mM to 50 mM metal ion chelating agent and at least one pharmacologically suitable isotonic vehicle, said metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

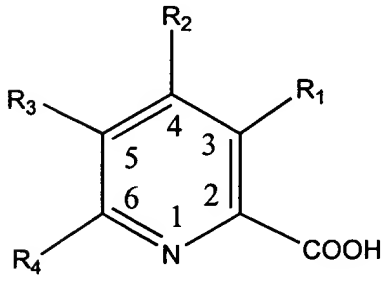
49. The intranasal solution of claim 48 wherein R_3 is a butyl group.

50. The intranasal solution of claim 48 comprising in the range between about 0.1 mM to about 20 mM said metal ion chelating agent.

51. The intranasal solution of claim 50 comprising approximately 3mM of said metal ion chelating agent.

52. The intranasal solution of claim 48 wherein R_1, R_2, R_3 and R_4 are hydrogen.

53. An intranasal solution comprising in the range between about 0.01 mM to about 50 mM metal ion chelating agent and at least one pharmacologically suitable isotonic vehicle, said metal ion chelating agent represented by the following structure:

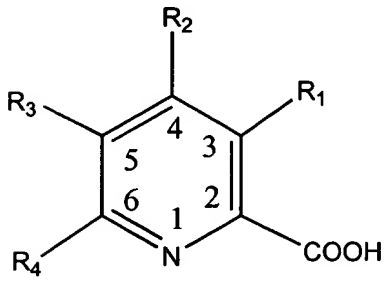


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen;

and R_3 is a butyl group.

54. An inhalant comprising in the range of between about 0.001% to about 50% metal ion chelating agent and at least one nebulizing agent, wherein said metal ion chelating agent is represented by the following structure:



or a pharmacologically acceptable salt thereof,

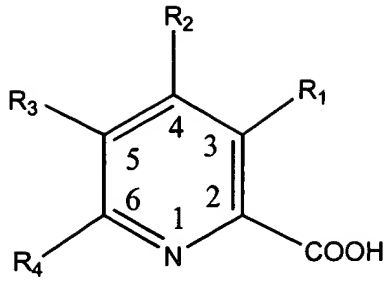
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

55. The inhalant of claim 54 wherein R_3 is a butyl group.

56. The inhalant of claim 54 wherein said nebulizing agent is at least one nebulizing agent selected from a group consisting of water and saline.

57. The inhalant of claim 54 wherein R_1, R_2, R_3 and R_4 are hydrogen.

58. An inhalant comprising in the range of between about 0.001% to about 50% metal ion chelating agent and at least one nebulizing agent, wherein said metal ion chelating agent is represented by the following structure:

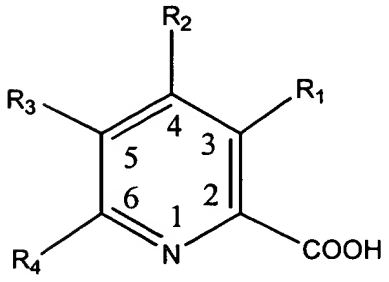


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

59. A formulation for the treatment of sunburn comprising in the range of between about 1% to about 99% metal ion chelating agent and a topical lotion, wherein said metal ion chelating agent is represented by the following formula:



or a pharmacologically acceptable salt thereof,

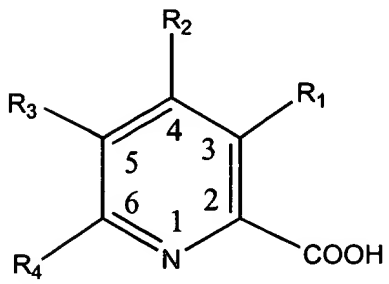
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

60. The formulation of claim 59 comprising in the range of between about 5% to about 15% of said metal ion chelating agent.

61. The formulation of claim 59 wherein R_3 is a butyl group.

62. The formulation of claim 59 wherein R_1, R_2, R_3 and R_4 are hydrogen

63. A formulation for the treatment of inflammation associated with acne and sunburn comprising in the range between about 1% to about 99% metal ion chelating agent and a topical lotion, wherein said metal ion chelating agent is represented by the following formula:



or a pharmacologically acceptable salt thereof,

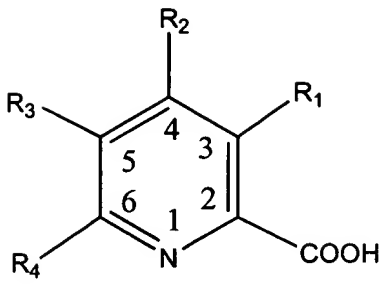
wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

64. The formulation of claim 63 comprising in the range of between about 5% to about 15% of said metal ion chelating agent.

65. An ophthalmic preparation for the control of angiogenesis comprising in the range between about 0.01% to about 99% metal ion chelating agent and a pharmacologically

acceptable carrier, wherein said metal ion chelating agent is represented by the following formula:



or a pharmacologically acceptable salt thereof,

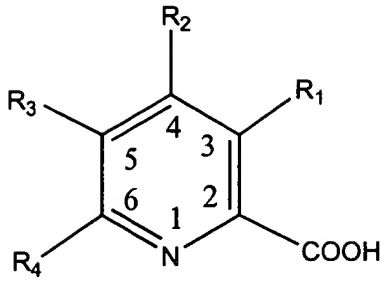
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

66. The ophthalmic preparation of claim 65 wherein R_3 is a butyl group.

67. The ophthalmic preparation of claim 65 comprising in the range of about 5% to about 10% said metal ion chelating agent.

68. The ophthalmic preparation of claim 65 wherein R_1, R_2, R_3 and R_4 are hydrogen.

69. An ophthalmic preparation for the control of angiogenesis comprising in the range between about 0.01% to about 99% metal ion chelating agent and a pharmacologically acceptable carrier, wherein said metal ion chelating agent is represented by the following formula:

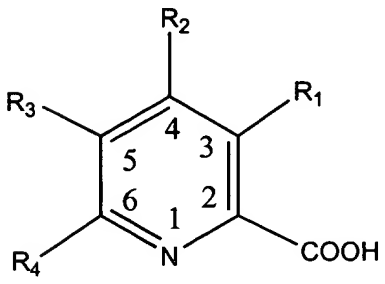


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

70. A lavage comprising up to about 99% of at least one metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

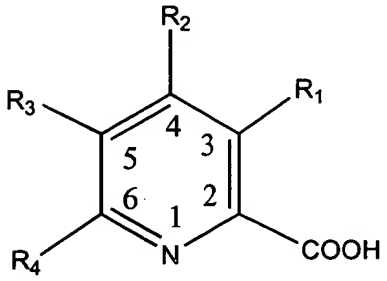
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

71. The lavage of claim 70 comprising about 20% said metal ion chelating agent.

72. The lavage of claim 70 wherein R_3 is a butyl group.

73. The lavage of claim 70 wherein R_1, R_2, R_3 and R_4 are hydrogen.

74. A lavage comprising up to about 99% of at least one metal ion chelating agent represented by the following structure:

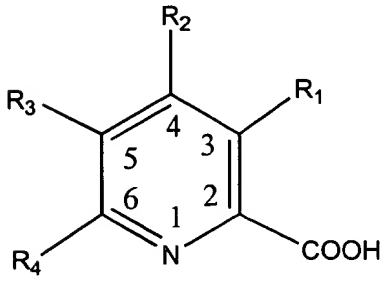


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

75. A preservative comprising less than about 0.025% metal ion chelating agent, said metal ion chelating agent represented by the following structure:



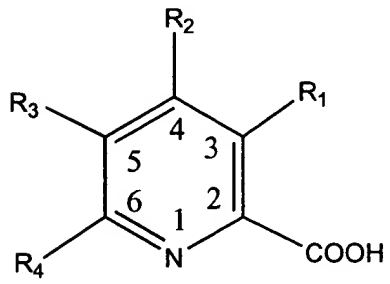
or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

76. The preservative of claim 75 wherein R_3 is a butyl group.

77. The preservative of claim 75 wherein R_1, R_2, R_3 and R_4 are hydrogen.

78. A preservative comprising less than about 0.025% metal ion chelating agent, said metal ion chelating agent represented by the following structure:

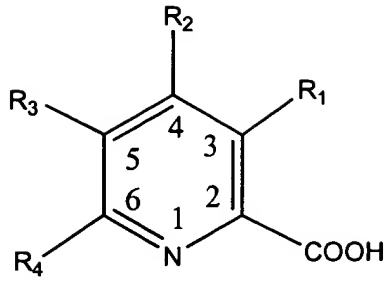


or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.

79. A method of preserving an item to be preserved comprising contacting a metal ion chelating agent with said item, said metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

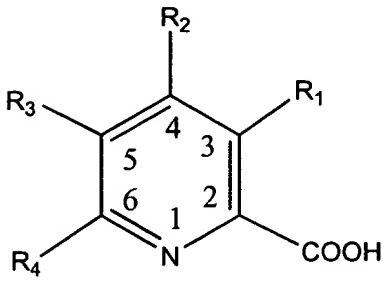
wherein R_1, R_2, R_3 or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen.

80. The method of claim 79 wherein R_3 is a butyl group.

81. The method of claim 79 wherein said step of contacting said metal ion chelating agent with an item to be preserved comprises contacting less than about 0.025% said metal ion chelating agent with said item to be preserved.

82. The method of claim 79 wherein R_1, R_2, R_3 and R_4 are hydrogen.

83. A method of preserving an item to be preserved comprising contacting said metal ion chelating agent with an item to be preserved, said metal ion chelating agent represented by the following structure:



or a pharmacologically acceptable salt thereof,

wherein R_1, R_2, or R_4 is selected from the group consisting of a peptide of sixteen amino acids, carboxyl group, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, secondary butyl group, tertiary butyl group, pentyl group, isopentyl group, neopentyl group, fluorine, chlorine, bromine, iodine, and hydrogen; and

R_3 is a butyl group.